

FIG. 1A

FIG. 1A

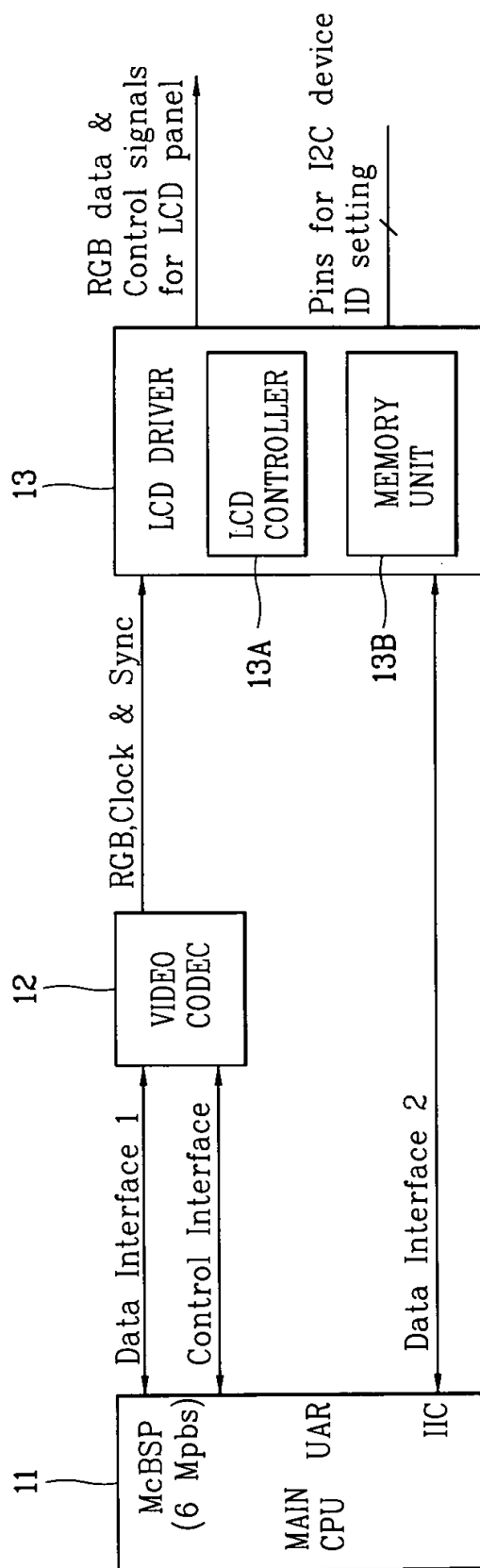


FIG. 1B

3 Mode Operation

Active Mode(Data Interface 1):

- JPEG, GIF
- MPEG4
- MP3(128kbps). AAC
- Animation(Game)
- Text Service

Standby Mode(Data Interface 2):

- Animation, Still Image & Text, Text only

Power Down Mode

- LCD Driver IC power off, but SRAM is alive

Display Scheme

Active Mode

- Normal Operation
- Main CPU, Video CODEC and LCD driver IC are all alive
- LCD display frame rate of ~30 frames/sec

Standby Mode

- Power Saving Mode(Video CODEC is powered off)
- Animation or Still Image & Text or Text can be displayed
- LCD display frame rate of ~5 frames/sec

Power Down Mode

- Nothing is displayed, Ready for displaying

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FIG. 2

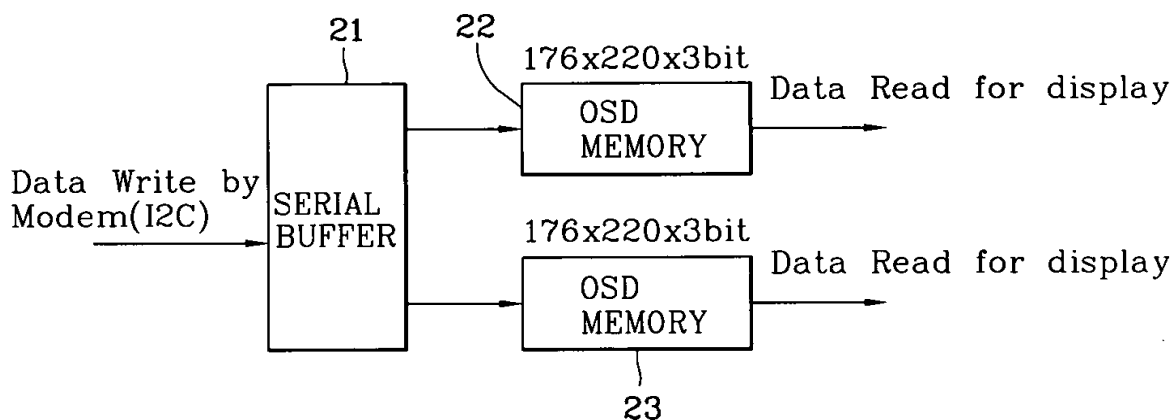
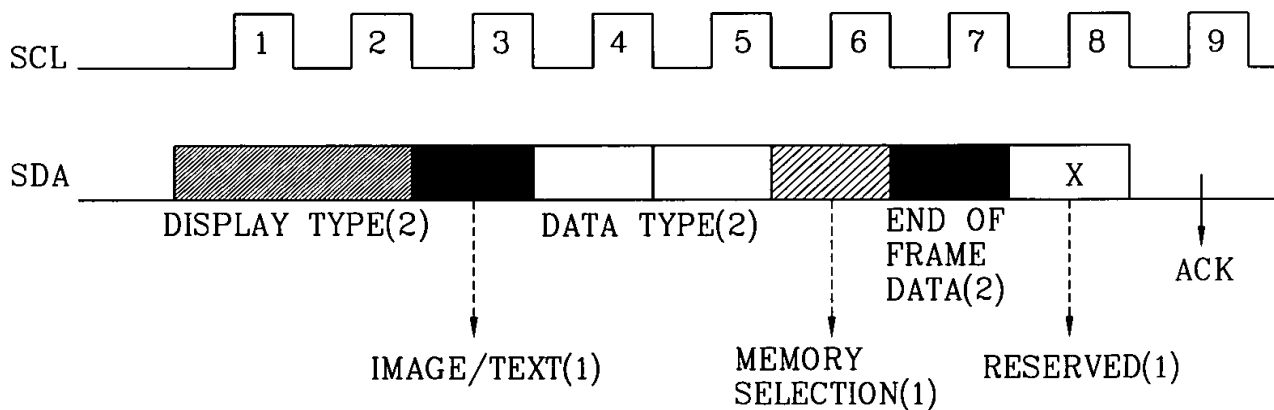


FIG. 3



DISPLAY TYPE(2bits)
 00: ANIMATION
 01: STILL IMAGE & TEXT
 10: TEXT ONLY
 11: REGISTER CONTROL

IMAGE/TEXT(1bit)
 0: TEXT DATA
 1: IMAGE DATA

DATA TYPE(2bit)
 00: BURST DATA
 01: AREA DATA
 10: LINE DATA
 11: PIXEL DATA

OSD MEMORY SELECTION(1bit)
 0: OSD MEMORY 1(FIRST)
 1: OSD MEMORY 2(SECOND)

END OF FRAME DATA(1bit)
 0: NOT EOFD
 1: EOFD

FIG. 4

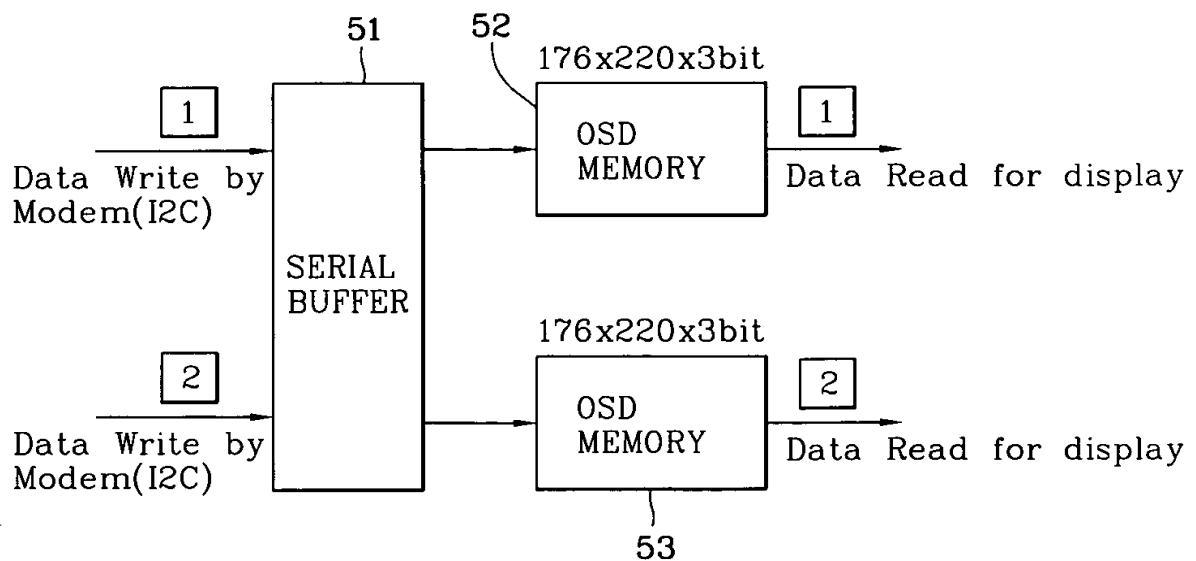
IMAGE DATA REPRESENTATION(3bits)

000: BLACK
001: BLUE
010: GREEN
011: CYAN
100: RED
101: MAGENTA
110: YELLOW
111: WHITE

TEXT DATA REPRESENTATION(1bit)

0: BACKGROUND DATA
1: TEXT DATA

FIG. 5



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FIG. 6

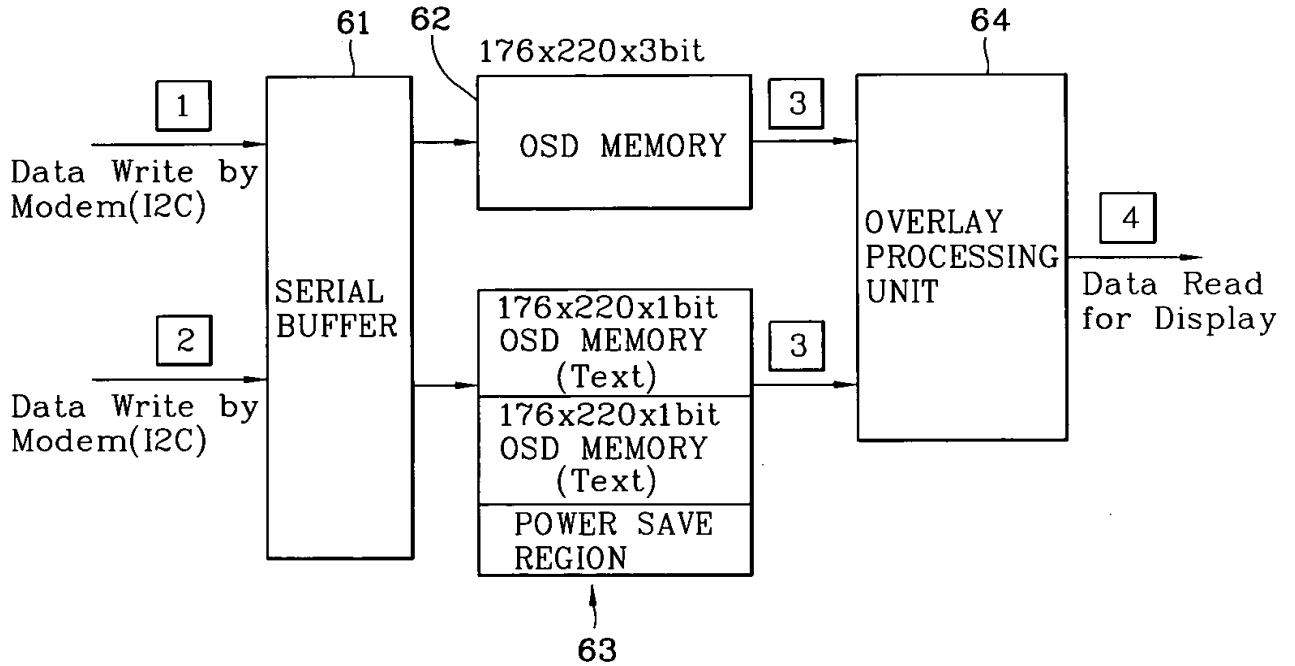


FIG. 7

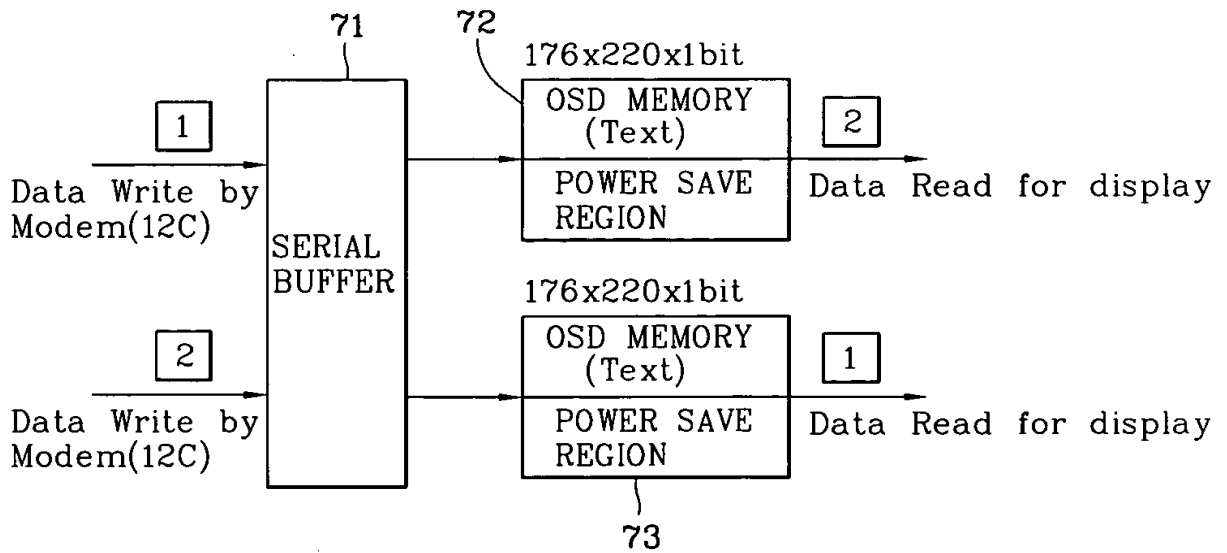
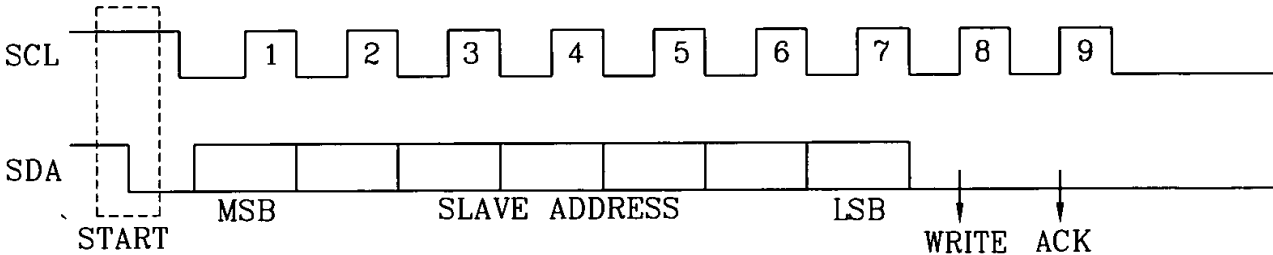
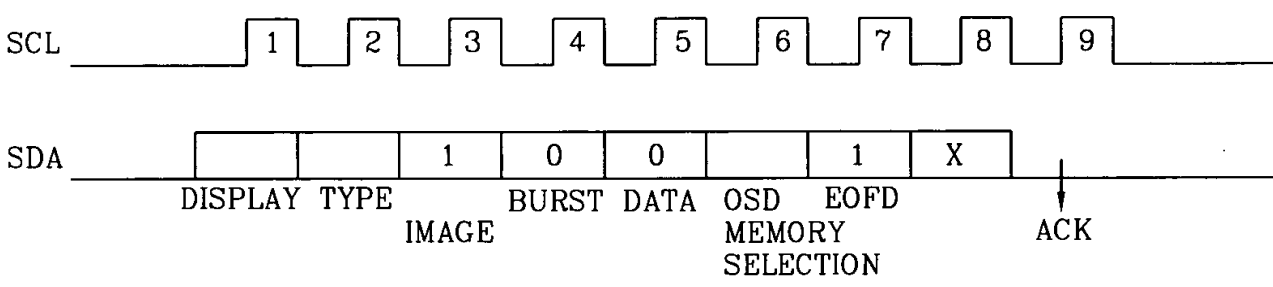


FIG. 8A

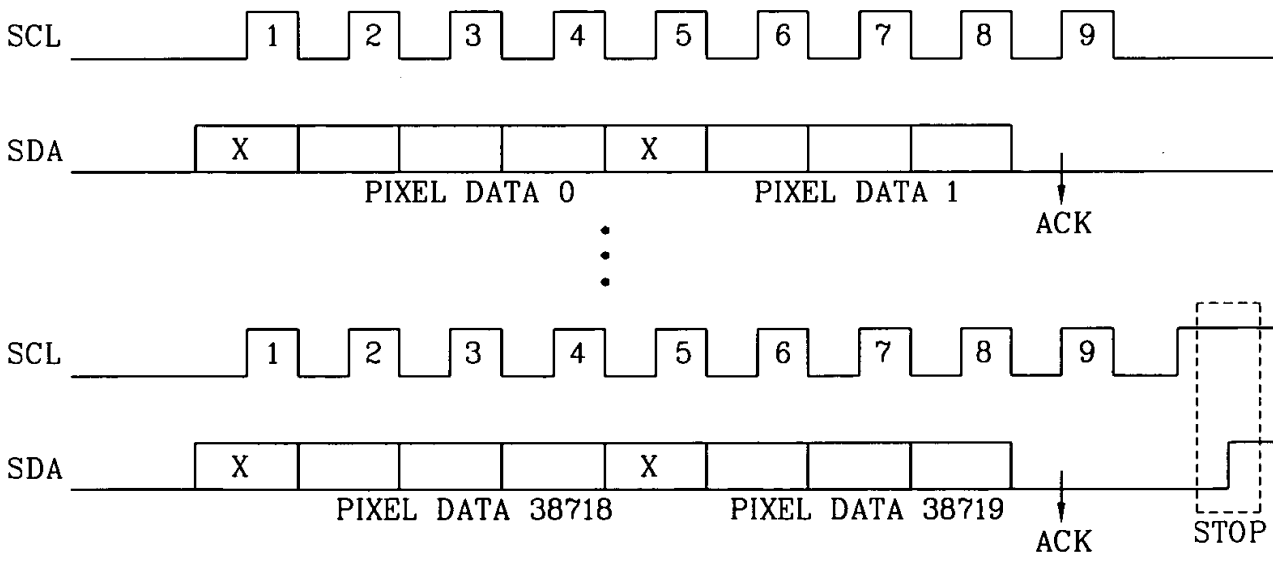
CASE 1. BURST DATA WRITE(IMAGE)
SLAVE ADDRESS TRANSFER



MODE SETTING



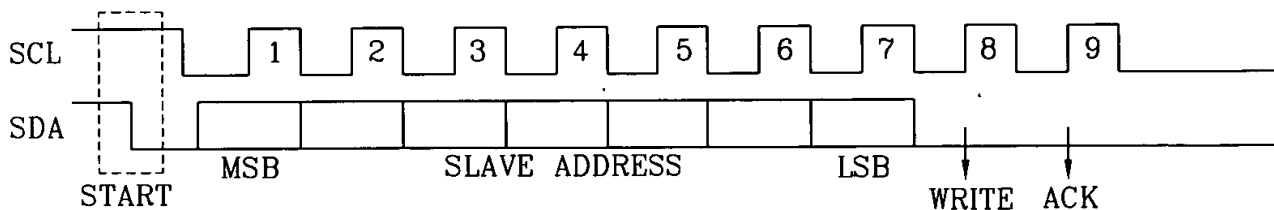
PIXEL DATA TRANSFER



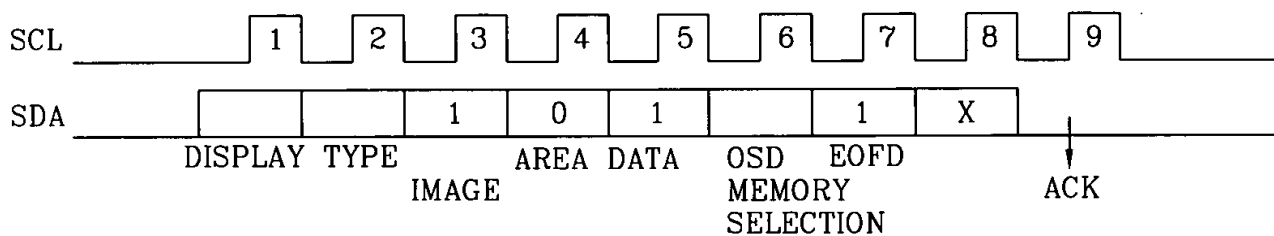
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FIG. 8B

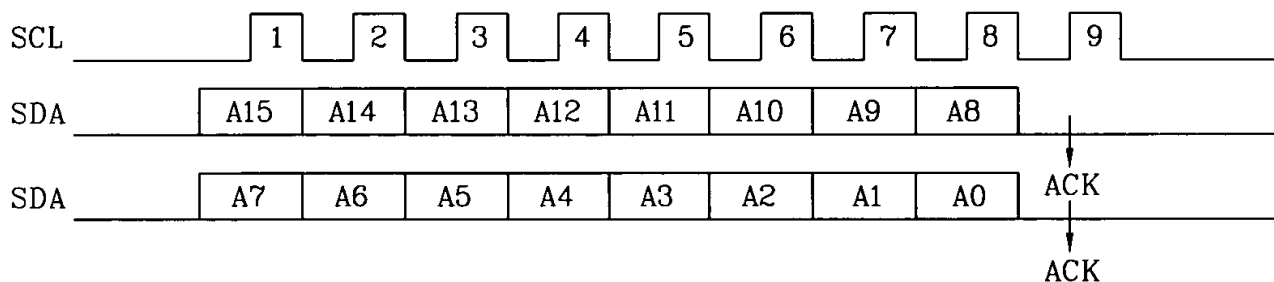
CASE 2. AREA DATA WRITE(IMAGE) SLAVE ADDRESS TRANSFER



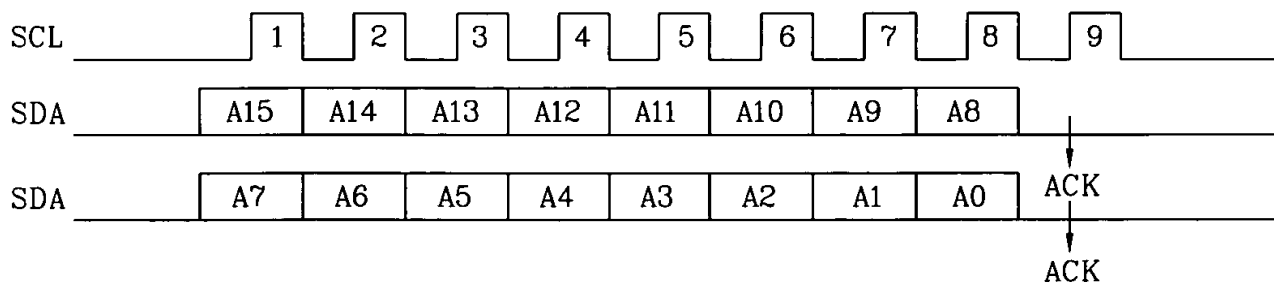
MODE SETTING



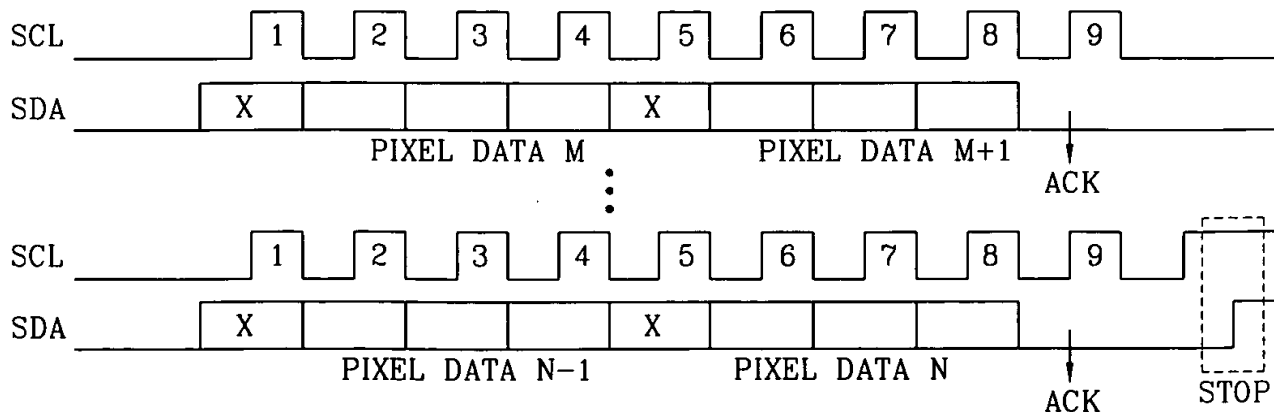
AREA START ADDRESS TRANSFER



AREA END ADDRESS TRANSFER



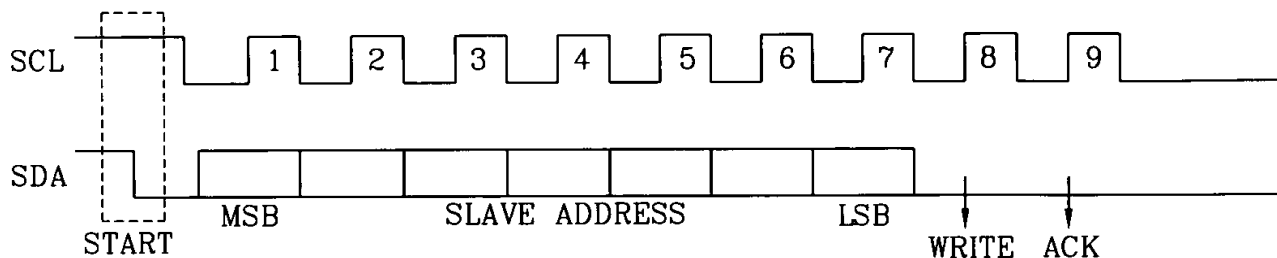
PIXEL DATA TRANSFER



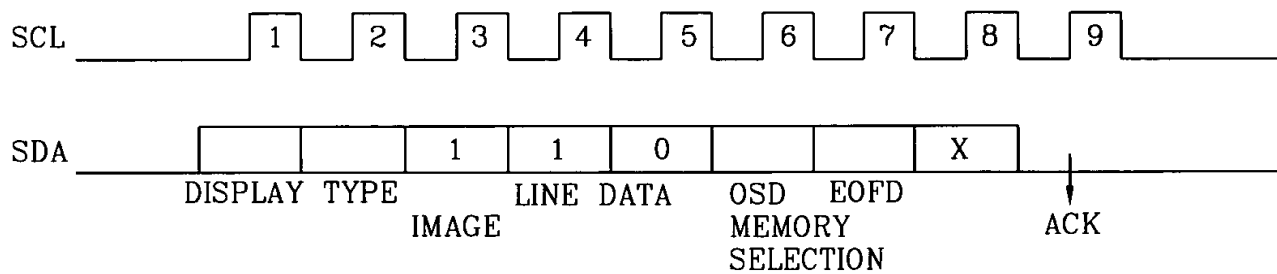
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FIG. 8C

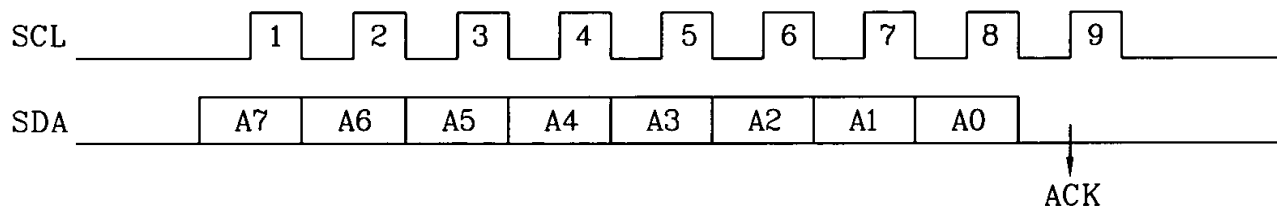
CASE 3. LINE DATA WRITE(IMAGE) SLAVE ADDRESS TRANSFER



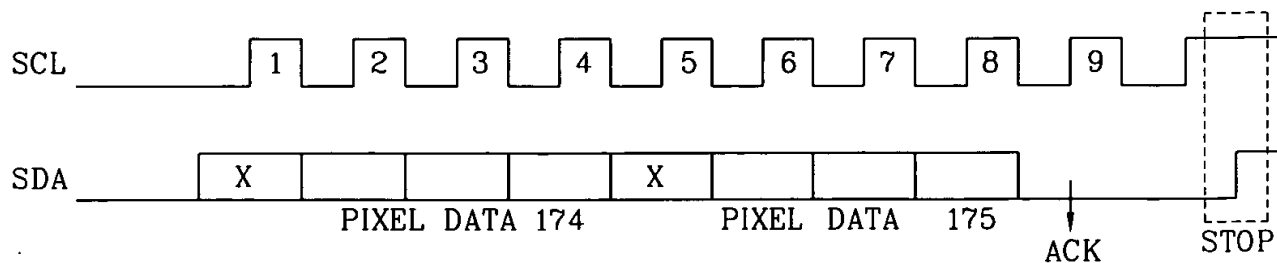
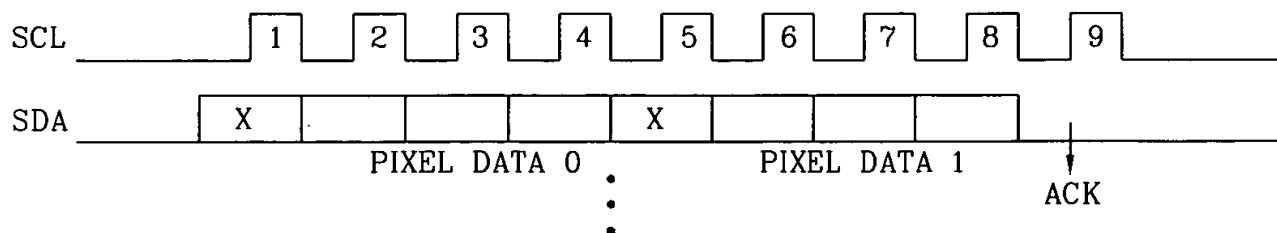
MODE SETTING



LINE ADDRESS TRANSFER



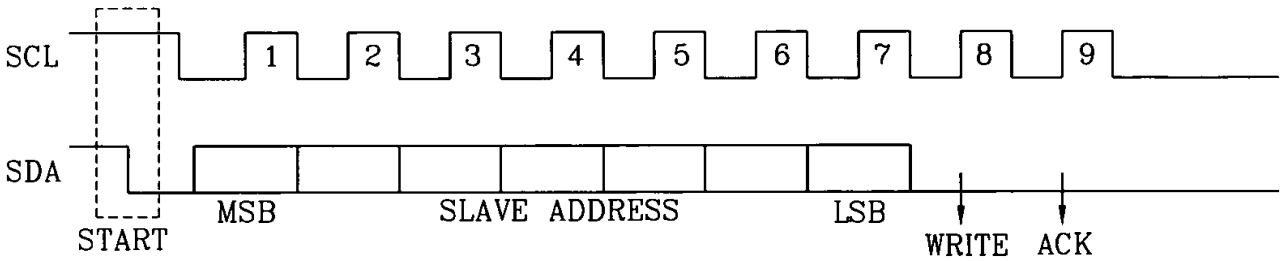
PIXEL DATA TRANSFER



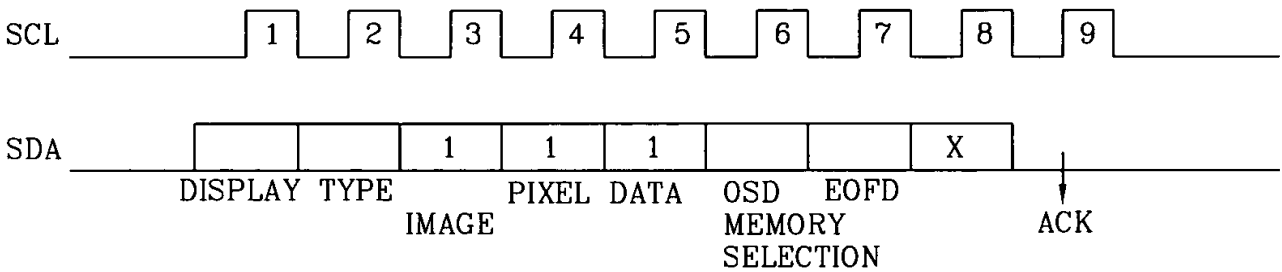
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FIG. 8D

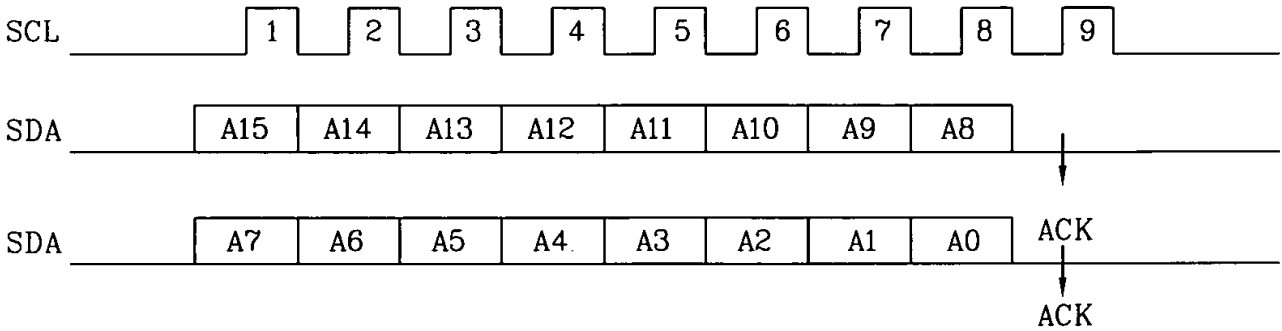
CASE 4. PIXEL DATA WRITE(IMAGE)
SLAVE ADDRESS TRANSFER



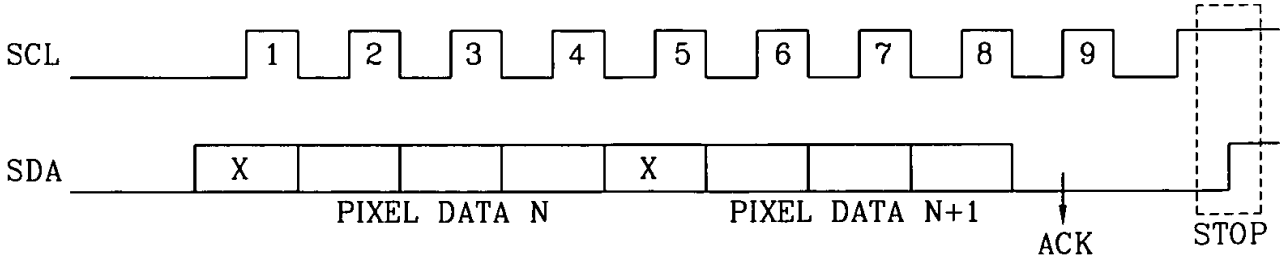
MODE SETTING



PIXEL ADDRESS TRANSFER



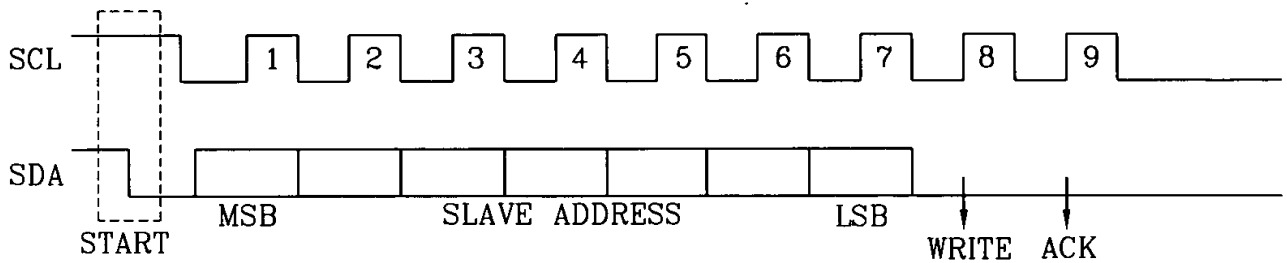
PIXEL DATA TRANSFER



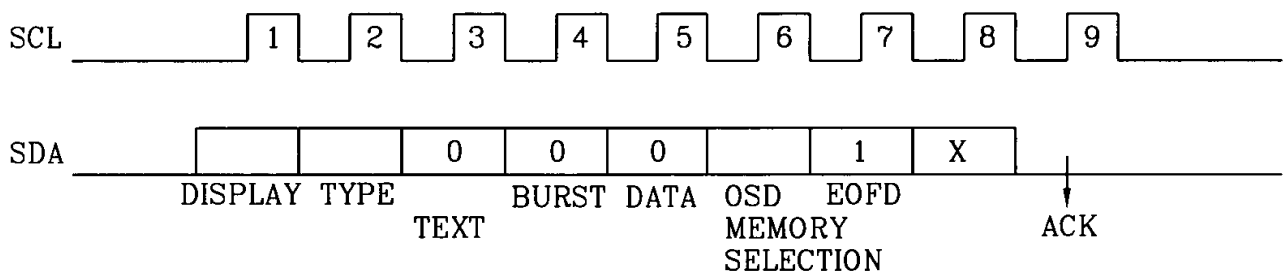
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FIG. 8E

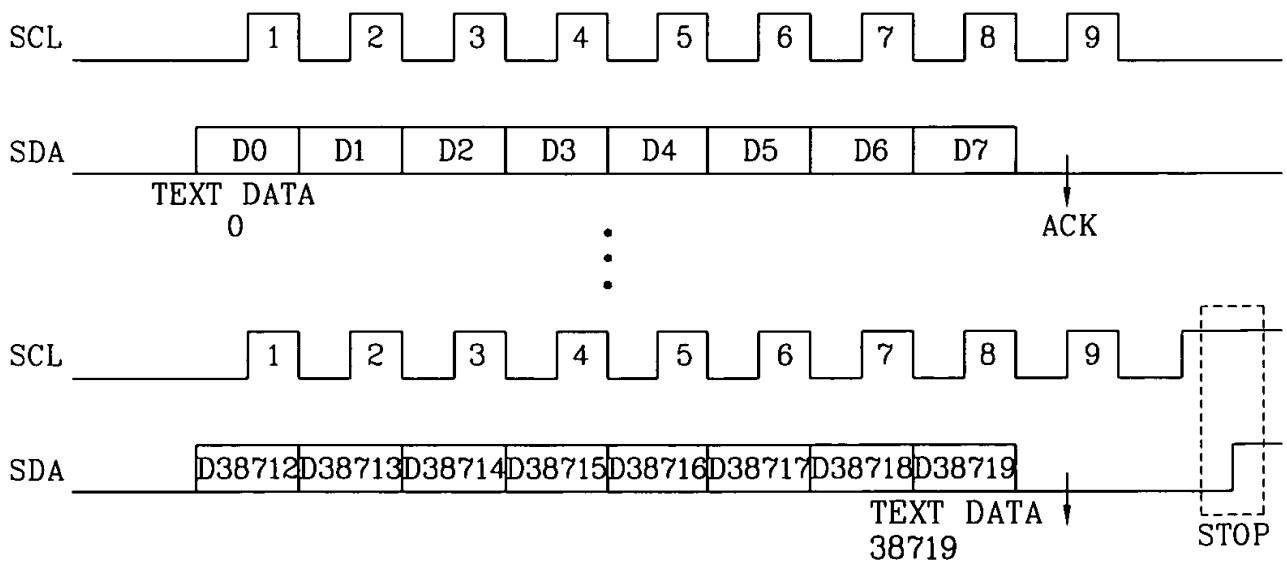
CASE 5. BURST DATA WRITE(TEXT) SLAVE ADDRESS TRANSFER



MODE SETTING



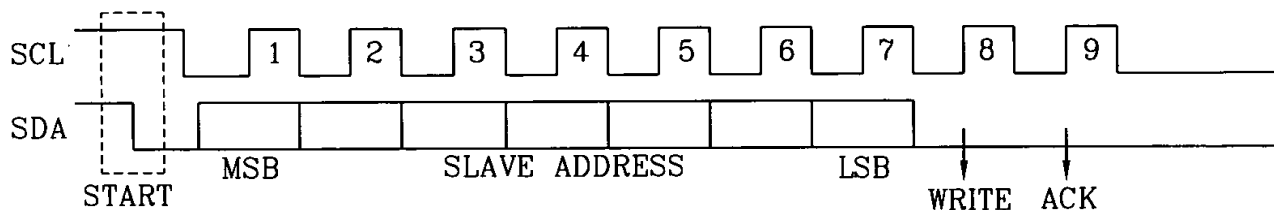
TEXT DATA TRANSFER



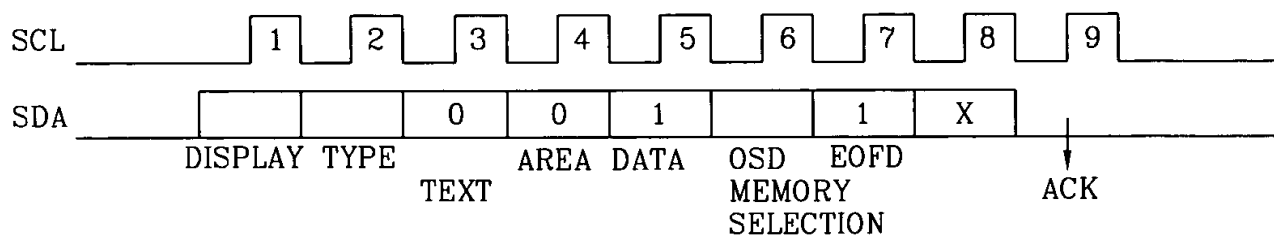
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FIG. 8F

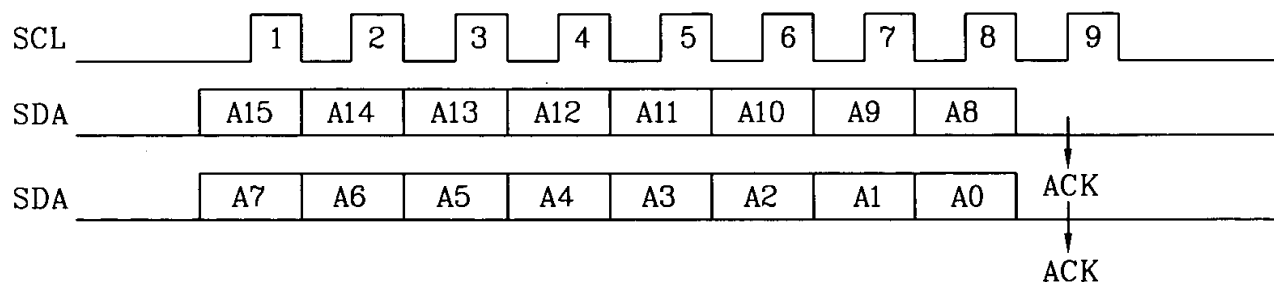
CASE 6. AREA DATA WRITE(TEXT) SLAVE ADDRESS TRANSFER



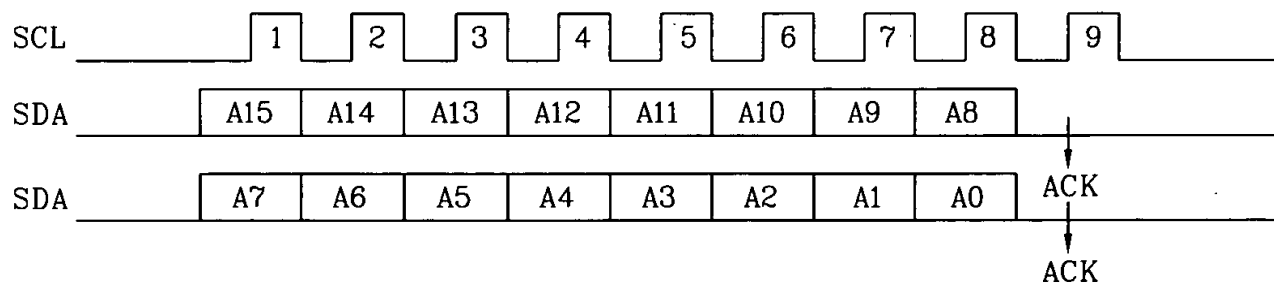
MODE SETTING



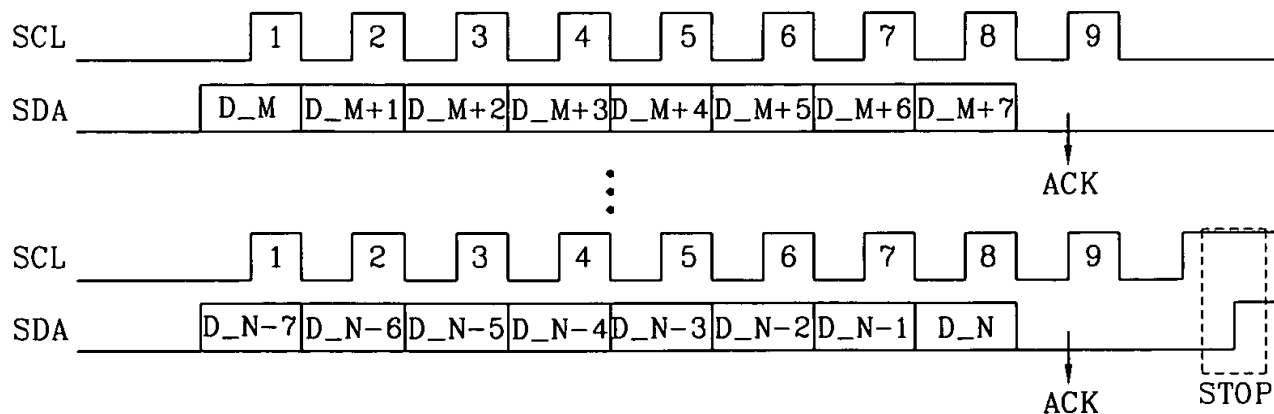
AREA START ADDRESS TRANSFER



AREA END ADDRESS TRANSFER



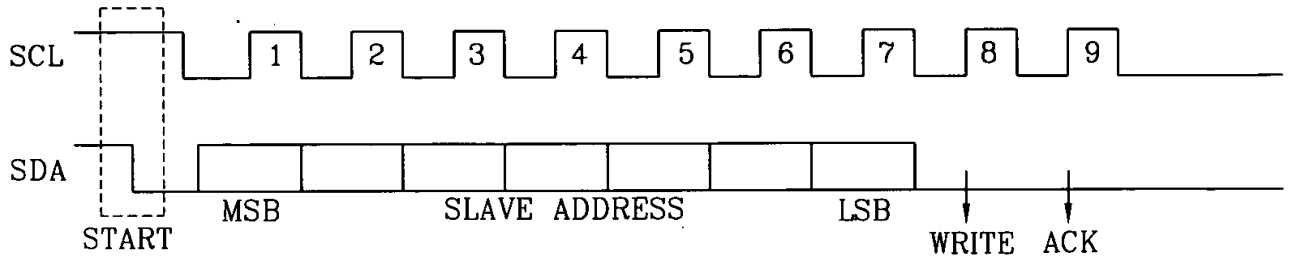
TEXT DATA TRANSFER



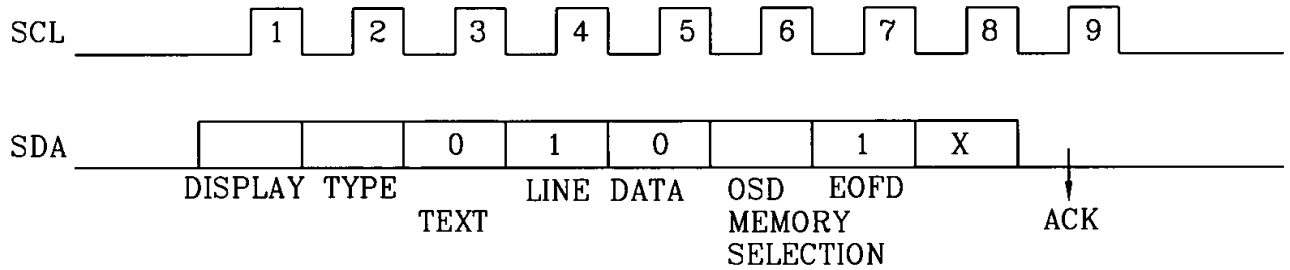
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FIG. 8G

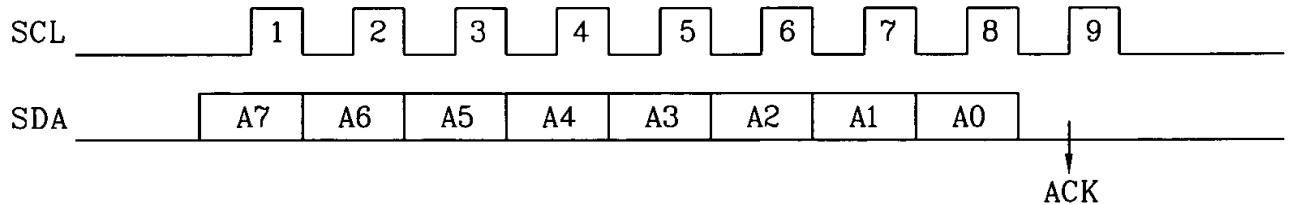
CASE 7. LINE DATA WRITE(TEXT) SLAVE ADDRESS TRANSFER



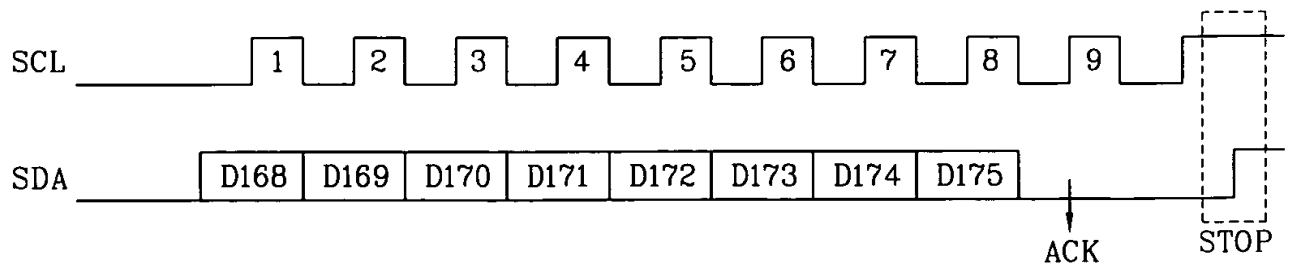
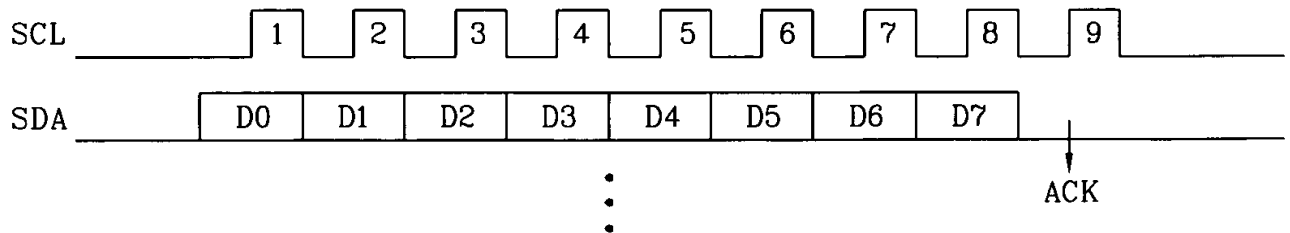
MODE SETTING



LINE ADDRESS TRANSFER



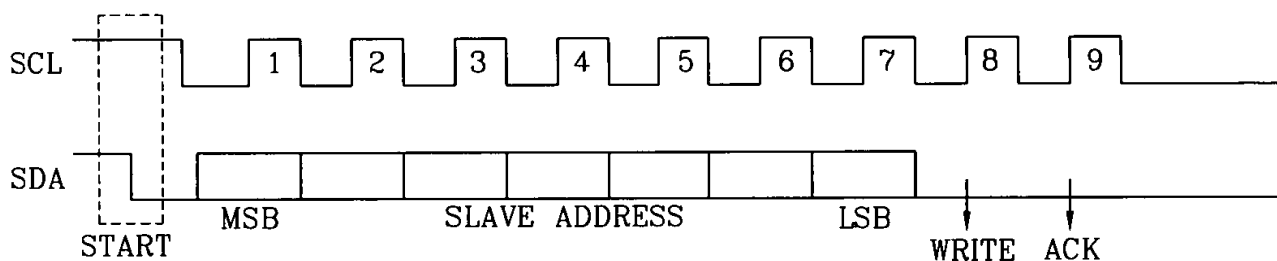
TEXT DATA TRANSFER



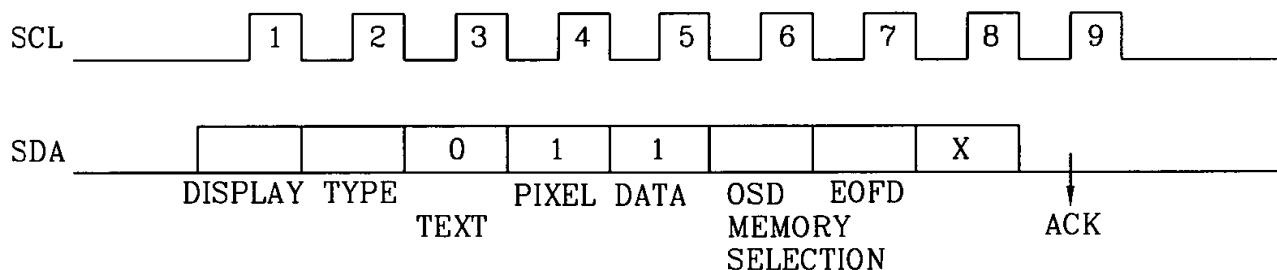
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FIG. 8H

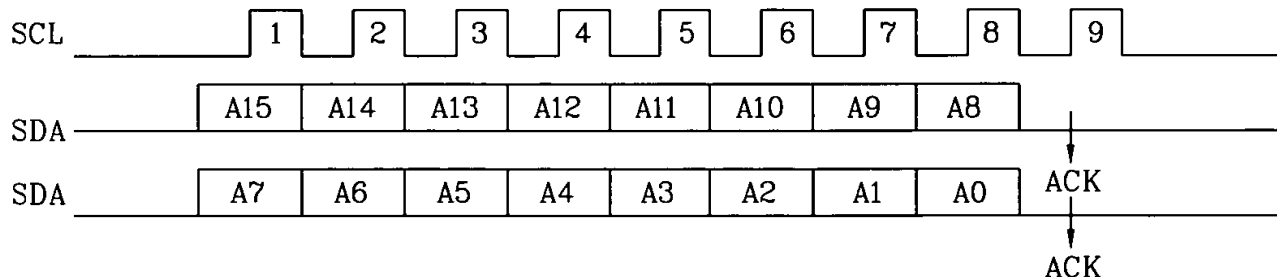
CASE 8. PIXEL DATA WRITE(TEXT) SLAVE ADDRESS TRANSFER



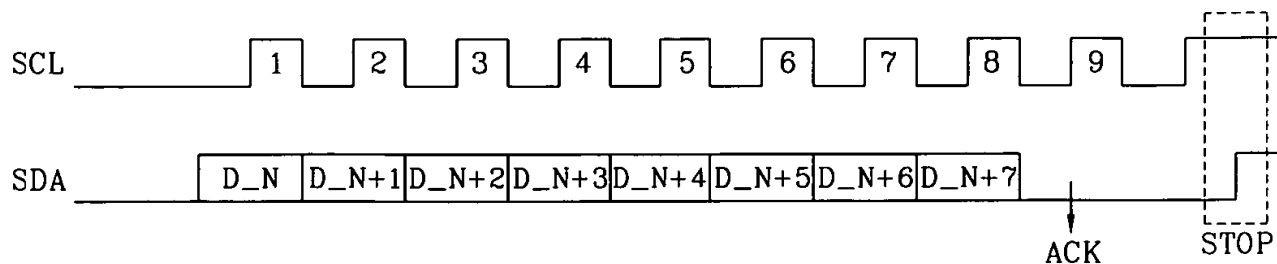
MODE SETTING



PIXEL ADDRESS TRANSFER



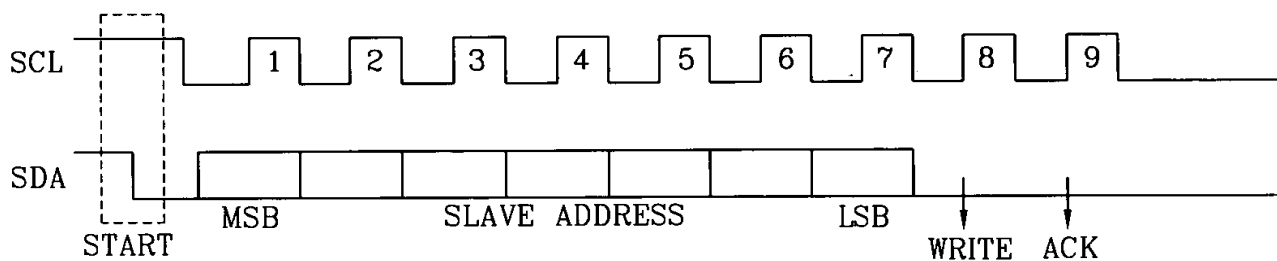
TEXT DATA TRANSFER



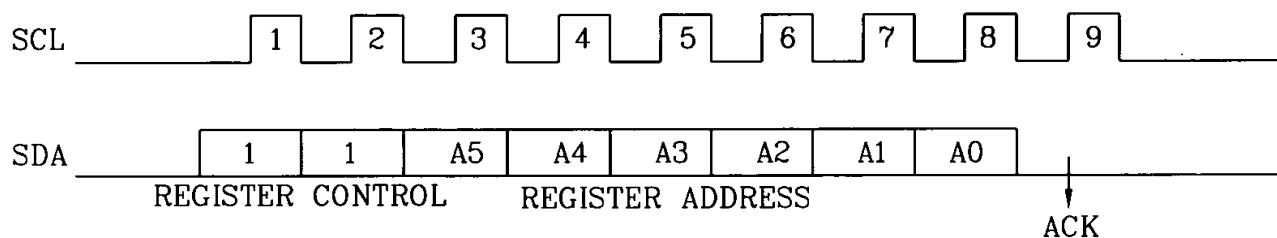
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FIG. 9

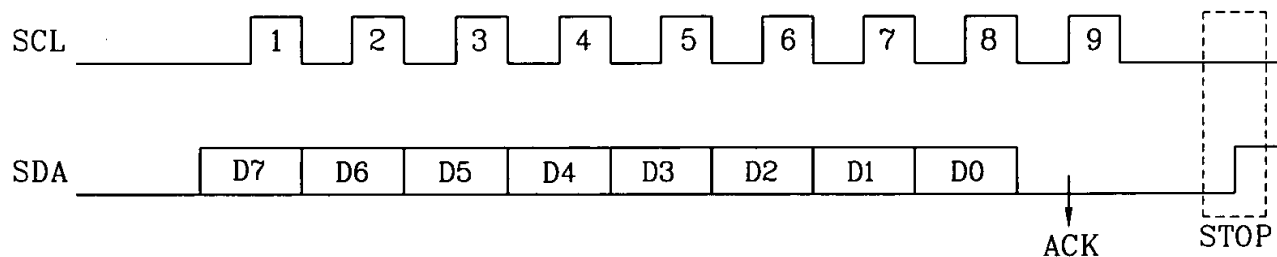
SLAVE ADDRESS TRANSFER



MODE SETTING & REGISTER ADDRESS TRANSFER



REGISTER DATA TRANSFER



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